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Attorney Docket Number

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U.S. PATENT DOCUMENTS							
Examiner	Cite No. 1	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where		
Initials*		Number-Kind Code <sup>2 (If known)</sup>	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear		
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				Application Number	10/722,587	
INFC	RMATION	DISCLOS	SURE	Filing Date	November 28, 2003	
STA	TEMENT B	Y APPLIC	ANT	First Named Inventor	ROSENBERG, Robert D.	
				Art Unit	1623	
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Sheet	2	of	3	Attorney Docket Number	P-6170-US	

		NON PATENT LITERATURE DOCUMENTS	
xaminer	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	В	Aikawa, et al (2001) "Multiple isozymes of heparan sulfate/heparin GlcNAc N-deacetylase/GlcN N-sulfotransferase. Structure and activity of the fourth member, NDST4." J. Biol. Chem. 276: 5876-82	
	С	Habuchi, et al (2000) "The occurrence of three isoforms of heparan sulfate 6-O-sulfotransferase having different specificities for hexuronic acid adjacent to the targeted N-sulfoglucosamine." J. Biol. Chem. 275: 2859-68	
	D	Kovensky, et al (1999) "A synthetic heparan sulfate pentasaccharide, exclusively containing L-iduronic acid, displays higher affinity for FGF-2 than its D-glucuronic acid-containing isomers." Bioorg. Med. Chem. 7: 1567-80	
	E	Kuberan, et al (2002) "Analysis of heparan sulfate oligosaccharides with ion pair- reverse phase capillary high performance liquid chromatography-microelectrospray ionization time-of-flight mass spectrometry." J. Am. Chem. Soc. 124: 8707-18	
	F	Leali, et al (2001) "Fibroblast growth factor-2 antagonist activity and angiostatic capacity of sulfated Escherichia coli K5 polysaccharide derivatives." J. Biol. Chem. 276: 37900-08	
	G	Lemieux, et al (1979) "The azidonitration of tri-o-acetyl-D-galactal" Can. J. Chem. 57: 1244-51	
	Н	Li, et al (1977) "Biosynthesis of Heparin/Heparan Sulfate" J. Biol. Chem. 272(44): 28158-63	
	ı	Shaklee, et al (1984) "Hydrazinolysis of heparin and other glycosaminoglycans." Biochem. J. 217: 187-97	
	000000000000000000000000000000000000000	Toshima and Tatsuta (1993) Chem. Rev. 93: 1503-91	00000000
	J		
	к	Orellana, A., et al (1994) "Molecular cloning and expression of a glycosaminoglycan N-acetylglucosaminyl N-deacetylase/N-sulfotransferase from a heparin-producing cell line." <i>J Biol Chem</i> <b>269</b> , 2270-6	
	L	Lloyd, A.G., et al (1971) "Embery, G. & Fowler, L.J. Studies on heparin degradation. I. Preparation of (35 S) sulphamate derivatives for studies on heparin degrading enzymes of mammalian origin." <i>Biochem Pharmacol</i> <b>20</b> , 637-48	
	м	Campbell, P. et al. (1994) "Biosynthesis of heparin/heparan sulfate. Purification of the D-glucuronyl C-5 epimerase from bovine liver." J Biol Chem 269, 26953-8	

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Signature	Considered	

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				Application Number	10/722,587	
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STA	<b>FEMENT </b>	SY APPLI	CANT	First Named Inventor	ROSENBERG, Robert D.	
				Art Unit	1623	
(us	e as many she	ets as necess	ary)	Examiner Name	Not yet known	
Sheet	3	of	3	Attorney Docket Number	P-6170-US	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	N	PIKAS, et al (1999) "Enzymes involved in biosynthesis and degradation of heparin- related polysaccharides, Trends in Glycoscience and Glytechnology, vol. 11 no. 61 303-308.	
	0	KUSCHE, et al (1991) "Biosynthesis of heparin. Use of Escherichia coli K5 capsular polysaccharide as a model substrate in enzyme polymer-modification reactions, Biochemical Journal vol. 275 no. 1 151-158.	
	Р	FORSBERG, et al (1999) "Abnormal mast cell in mice deficient in a heparin- synthesizing enzyme, Nature vol. 400 no. 6746 773-776.	
	Q	HERNAIZ, et al (*2000) "Enzymatic modifications of heparan sulfate on a biochip promotes its interaction with antithrombin III, BBRC vol. 276 no. 1 292-297.	
	R	PEJLER, et al (1987) "Structure and affinity for antithrombin of heraoan sulfate chains derived from basement membrane proteoglycans. J Biol Chem vol 262 no. 1 5036-5043.	
	s	Camejo, et al (1992) "Binding of Low Density Lipoproteins by Proteoglycans Synthesized by Proliferating and Quiescent Human Arteial Smooth Muscle Cells." The Journal of Biological Chemistry. 14131-14137.	
	Т	Galanina, et al (1998) "Determination of Carbohydrate Specificity of Monoclonal Antibodies against MUC1." Tumor Biol. 79-87.	
	υ	Van den Born, et al (1995) "Presence of N-Unsubstituted Glucosamine Units in Native Heparan Sulfate Revealed by Monoclonal Antibody." The Journal of Biological Chemistry 31303-31309.	
	v	Zhou, et al (1997) "Heparin-dependent Fibroblast Growth Factor Activities:Effects of Defined Heparin Oligosaccharides." European Journal of Cell Biology 71-80.	

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<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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